

MINNIS
Serial No. **Unknown**

REMARKS

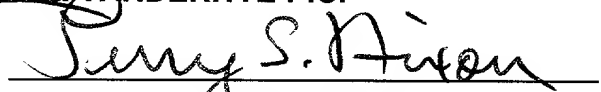
Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "**Version with markings to show changes made.**"

The above amendments are made to place the claims in a more traditional format.

Respectfully submitted,

NIXON & VANDERHYE P.C.

By:



Larry S. Nixon

Reg. No. 25,640

LSN:Imy

1100 North Glebe Road, 8th Floor
Arlington, VA 22201-4714
Telephone: (703) 816-4000
Facsimile: (703) 816-4100

MINNIS
Serial No. **Unknown**

VERSION WITH MARKINGS TO SHOW CHANGES MADE

9. (Amended) A program storage device readable by a computer, said device embodying computer readable code executable by the computer to perform method steps according to [any one of claims 1 to 6] claim 1.

10. (Amended) A signal embodying computer executable code for loading into a computer for the performance of the method according to [any one of claims 1 to 6] claim 1.

4/PATS

533 Rec'd PCT/PTO 15 AUG 2001
09/913462

1

SPEECH SYNTHESIS

The present invention relates to a method and apparatus for converting text to speech.

5

Although text-to-speech conversion apparatus has improved markedly over recent years, the sound of such apparatus reading a piece of text is still distinguishable from the sound of a human reading the same text. One reason for this is that text-to-speech converters occasionally apply phrasing that differs from that which would be
10 applied by a human reader. This makes speech synthesised from text more onerous to listen to than speech read by a human.

The development of methods for predicting the phrasing for an input sentence has, thus far, largely mirrored developments in language processing. Initially, automatic
15 language processing was not available, so early text-to-speech converters relied on punctuation for predicting phrasing. It was found that punctuation only represented the most significant boundaries between phrases, and often did not indicate how the boundary was to be conveyed acoustically. Hence, although this method was simple and reasonably effective, there was still room for improvement. Thereafter, as
20 automatic language processing developed, lexicons which indicated the part-of-speech associated with each word in the input text were used. Associating part-of-speech tags with words in the text increased the complexity of the apparatus without offering a concomitant improvement in the prediction of phrasing. More recently, the possibility of using rules to predict phrase boundaries from the length and syntactic
25 structure of the sentence has been discussed (Bachenko J and Fitzpatrick E: 'A computational grammar of discourse-neutral prosodic phrasing in English', Computational Linguistics, vol. 16, No. 3, pp155-170 (1990)). Others have proposed deriving statistical parameters from a database of sentences which have natural prosodic phrase boundaries marked (Wang, M. and Hirschberg J: 'Predicting
30 intonational boundaries automatically from text: the ATIS domain', Proc. of the DARPA Speech and Natural Language Workshop, pp 378-383 (February 1991)).